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MMPA Bulletin

Reducing Dolphin Mortality in the Eastern Tropical Pacific Tuna Fishery

This article, providing background on efforts to reduce dolphin mortality in the eastern tropical Pacific Ocean (ETP) tuna fishery, is the first in a series of articles devoted to explanation of the tuna-dolphin issue. Future issues of the Bulletin will include articles on the U.S. International Dolphin Conservation Program Act and on any binding international agreement reached by those nations harvesting yellowfin tuna in the ETP.

In the late 1950s, tuna fishermen began using purse seines to take advantage of the association between schools of large yellowfin tuna and schools of certain species of dolphin in the ETP. The MMPA was enacted in 1972, due in large part, to public reaction to the high levels of dolphin mortality caused by this practice. At that time, the ETP fishery was dominated by U.S. vessels, and the total annual dolphin mortality is estimated at over 350,000. Although the MMPA placed a moratorium on the taking and importing of marine mammals, certain exceptions were made, including the incidental mortality of dolphins in the yellowfin tuna fishery of the ETP.

"The MMPA was enacted due, in large part, to public reaction to the high levels of dolphin mortality...in the ETP tuna fishery."

The U.S. tuna industry was instrumental in developing gear and procedures for reducing mortality and for releasing animals. Although mortality was reduced by U.S. vessels, **total** mortality began to rise as a result of the growth of the foreign fleet. To address continued high mortality by foreign vessels, Congress amended the MMPA in 1984 to tighten the importation requirements for fish and fish products harvested by foreign tuna vessels in the ETP. These changes required nations exporting yellowfin tuna to the

United States to reduce dolphin mortality to comparable levels. These amendments also established ETP mortality limits for certain stocks of dolphins believed to be particularly susceptible to tuna fishing mortality.

In 1988, Congress again amended the MMPA, imposing additional requirements on domestic and foreign tuna fishermen with the expectation that overall mortality would decrease. Those amendments continued the maximum allowable take of 20,500 dolphins (killed or seriously injured) during the purse seining operations of the U.S. tuna fleet in the ETP. They also added requirements to and clarified what the Secretary of Commerce must consider when determining whether a foreign nation is taking measures comparable to those of the United States in protecting dolphin in the ETP fishery. These required the same prohibitions of the foreign fleet that were applicable to U.S. vessels including total dolphin mortality and mortality limits on certain dolphin stocks. The changes also required: 1) that nations show that they had complied with any U.S. ban on tuna imports, 2) skipper performance standards, 3) restrictions on sundown sets and the use of certain explosives, and 4) a National Academy of Sciences study on alternative methods of locating tuna.

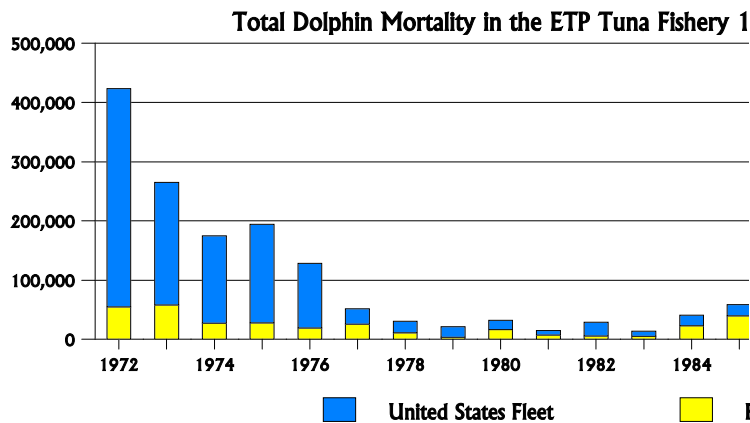
In 1990, Congress enacted the Dolphin Protection Consumer Information Act (DPCIA). The DPCIA required that tuna labeled as "dolphin safe" meet certain criteria. Tuna harvested in the ETP on a trip where *any* dolphins were encircled during the entire trip were not considered "dolphin safe". It was during the same period of time that U.S. tuna canners voluntarily began purchasing *only* "dolphin safe" tuna for the U.S. market.

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National Marine Fisheries Service, Office of Protected Resources



The International Dolphin Conservation Act

The International Dolphin Conservation Act (IDCA) was passed in 1992, to establish an international moratorium on harvesting tuna through the use of purse seine nets deployed on (encircling) dolphins or other marine mammals and made it unlawful for any person to sell "non-dolphin safe" tuna in the U.S. after June 1, 1994.

The IDCA required that the number of dolphins killed or seriously injured decrease from one year to the next. Although the United States was unsuccessful in getting other nations to commit to the moratorium, the IDCA significantly decreased the U.S. dolphin mortality. In fact, because the IDCA required that U.S. mortality decrease each year, the U.S. ETP yellowfin tuna fishery was closed in February 1994, when the incidental dolphin mortality approached that of the previous year. However, foreign participation in the ETP fishery continued to increase and mortality was monitored by a voluntary international dolphin conservation program under the Inter-American Tropical Tuna Commission (IATTC).

The La Jolla Agreement and the Panama Declaration

Although U.S. participation in the ETP tuna fishery came to a virtual standstill as a result of MMPA prohibitions on encircling dolphins, foreign participation in the fishery thrived. In the fall of 1992, many nations attending the annual meeting of the IATTC, signed the La Jolla Agreement. The agreement placed voluntary limits on the maximum number of dolphins that could be killed annually in the fishery, lowering the maximum each year to zero after seven years. The United States and eleven other countries came together again in 1995 and negotiated the Panama Declaration. The signing nations agreed that, if the United States made provisions in the MMPA for those countries participating in the international dolphin conservation program in the ETP, then they would enter into a binding international agreement for the continued protection of dolphins and the entire ETP ecosystem. The signing of the Panama Declaration established conservative species/stock specific annual dolphin mortality limits and is an important step toward reducing bycatch in commercial fisheries with sound ecosystem management. In August 1997, Congress passed the International Dolphin Conservation Program Act (IDCPA), amending the MMPA to provide exception to the import prohibitions for those nations participating in the international dolphin conservation program in the ETP.

The IDCPA and the U.S.

The IDCPA allows the entry into the United States of yellowfin tuna that would otherwise be embargoed because it was harvested by encircling marine mammals, provided the harvesting nation provides documentation of its participation in the international dolphin conservation program and its membership in the IATTC. The IDCPA allows U.S. fishing vessels to participate in the ETP yellowfin tuna fishery, and U.S. crew members on the vessels of other nations in the fishery will be able to take marine mammals during fishing operations outside of the U.S. Exclusive Economic Zone without being in violation of the MMPA. Also, under the IDCPA, the definition of "dolphin safe" tuna will change, first immediately, and then again if certain findings based upon mandated research are made. Basically, tuna harvested in a set where there is no observed dolphin mortality will be considered "dolphin safe", as opposed to the current definition where all tuna is deemed "non-dolphin safe" if it was harvested on a trip where there was just one intentional set on dolphins.

The IDCPA will provide enhanced protection for dolphins and will increase attention paid to the conservation of ecosystems and the sustainable use of living marine resources related to the tuna fishery in the ETP. The provisions of the IDCPA will become effective only when two certifications are made. The Secretary of State must certify to Congress that a binding legal instrument establishing the International Dolphin Conservation Program has been adopted and is in force, and the Secretary of Commerce must certify that research has begun on the effects of intentional chase and encirclement on ETP dolphins, and that funds are available to complete the first year of the study.

For additional information about the IDCPA, please contact Wanda L. Cain at (301) 713-2322 or J. Allison Routt at (562) 980-4019.

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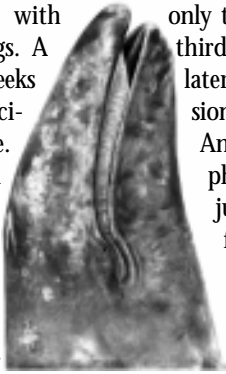
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Stranding News

Recent Mass and Unusual Stranding Events

As reported in the 1st Quarter 1998 issue of the *MMPA Bulletin* ("Effects of El Niño on Strandings"), recent anomalous weather patterns have had a significant impact on the number of pinniped strandings on the West Coast. In California, with some marine mammal rehabilitation facilities already at maximum capacity, the continued arrival of large numbers of California sea lion pups has led NMFS to adopt emergency measures. In Orange, Los Angeles, and Ventura counties, NMFS has established a 48-hour waiting period, prior to any rescue attempts, for all beach-stranded pinnipeds. Only those animals that seem to be suffering from human-related injuries will receive immediate attention. As rehabilitation centers along other areas of the California coast fill up, the region covered by these emergency measures may be extended. Since not all animals hauled out on the beach are starving or in need of rehabilitation, this waiting period should allow time for the healthier animals to return to the ocean without human interference. This "wait and see" policy will be in effect until the end of June.

So far in 1998, California has experienced 13 confirmed gray whale calf strandings. Of these, six stranded alive, with only two calves being successfully pushed out to sea with no resightings. A third live calf was pushed back, but later. Considering the sizes and conditions of the animals, the decisions were made to euthanize two individuals that stranded alive. Another gray whale calf was observed swimming in a harbor with physical evidence of a boat collision (its caudal peduncle was injured). It was found dead two days later. Necropsies were performed on all of the dead whales to determine why they washed ashore. In addition, on March 31, 1998 "JJ", the gray whale female calf, which had been rehabilitated for approximately 15 months, was released off Point Loma, California. The release was successful, and scientists hope that she will join the annual migration of gray whales on their way to Alaska.



In Cape Cod, Massachusetts, beginning January 30 and extending over the next ten days, there was a mass stranding of Atlantic white-sided dolphins, (*Lagenorhynchus acutus*), and common dolphins (*Delphinus delphis*). The total number of dead animals was 97, with the two species having 81 and 16 stranded individuals respectively. Full necropsies were performed on many of the animals, and at least "Level A" or basic data was collected on the rest. Tissues and blood were obtained for the National Marine Mammal Tissue Bank (see box at right). Tissue analyses will take several months and is being performed by several labs.

Many thanks to the dolphin stranding response teams put together by the New England Aquarium and NMFS Northeast Fisheries Science Center as well as numerous town officials and countless concerned citizens from Cape Cod. Everyone did a great job in their response to this event and in data and sample collection. **It couldn't have been done without everyone's help.**

Another unexpected stranding event occurred when a blue whale (*Balaenoptera musculus*) carcass was found on a beach in Rhode Island. On March 7, scientists got the rare opportunity to study the first complete blue whale specimen in this part of the world since the late 19th century. Preliminary findings suggest that the whale may have been killed by a collision with a ship.

For additional information, please contact Joe Cordaro in the Southwest Region at (562) 980-4022 or (562) 980-4017 or Dana Hartley in the Northeast Region at (508) 495-2000.

The National Marine Mammal Tissue Bank

One important aspect of the Marine Mammal Health and Stranding Response Program is the National Marine Mammal Tissue Bank, which was established in 1991. The Tissue Bank is maintained as part of the National Biomonitoring Specimen Bank at the National Institute of Standards and Technology (NIST) in cooperation with the U.S. Geological Survey Biological Resources Division and NMFS. In 1992, the NMMTB was merged with the already established Alaska Marine Mammal Tissue Archival Project.

Marine mammal species that are representative of a specific geographic area or trophic level have been selected in each region of the U.S. to serve as indicators of the overall health of the marine mammal populations and ecosystems in that area. Specimens are archived from these representative marine mammal species, endangered species, and animals involved in unusual mortality events. Samples are collected from beach-stranded animals, animals in capture/release programs, and those killed in subsistence hunts or as a result of human interaction.

Samples archived include: liver, kidney, blubber, blood, and in some cases, muscle. These tissues are collected and archived using standard protocols specifically designed by the program to ensure sample quality and to maintain sample integrity during long-term storage.

For additional information about the Tissue Bank, please contact Dr. Teri Rowles with NMFS at (301) 713-2322 or Dr. Paul Becker with NIST at (803) 762-8503.



NMFS Helps Find New Home For Captive Harbor Seals

During the first week of January 1998, NMFS took temporary custody of two captive harbor seals, "Sparky" and "Fuzz", who were being maintained on the premises of the former Maine Aquarium in Saco, Maine. Both seals had been at the Aquarium for 14 years after having arrived as stranded pups. After going into bankruptcy during the summer of 1997, The Maine Aquarium went into receivership of the Small Business Administration. In September 1997, the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), notified NMFS that the aquarium no longer held a valid Exhibitor's license under the Animal Welfare Act (AWA).

APHIS determined that they could not take action under the AWA to place the seals in an appropriate home and asked NMFS for assistance to ensure that the public display requirements under the Marine Mammal Protection Act (MMPA) would be upheld.

APHIS offered the assistance of a veterinarian inspector who was familiar with the situation. The Detroit Zoo was contacted and agreed to take custody of the seals.

Section 104(c)(2)(A) of the MMPA allows for the public display of marine mammals provided that the holder:

1. Offers a program for education or conservation purposes that is based on professionally recognized standards of the public display community;
2. Is registered or holds a license under the AWA; and
3. Maintains facilities for the public display of marine

NMFS staff from the Offices of Protected Resources and Northeast Region Enforcement arrived to take possession of the seals on January 3. A former employee of the Aquarium assisted NMFS with the care and maintenance of the seals until staff from the Detroit Zoo arrived the next day. The APHIS veterinarian inspector was also on-site to ensure that the seals were transported properly. "Sparky" and "Fuzz" are now at the Detroit Zoo's pinniped exhibit, home to several other harbor seals. Accord-

ing to zoo officials, the new arrivals seem to have assimilated well to their new surroundings.

For more information about NMFS' role in the care of captive marine mammals, please contact Ann Terbush or Trevor Spradlin at (301) 713-2289.

NOAA Formally Dedicates Hawaiian Humpback Whale National Marine Sanctuary

On February 16, NOAA's Assistant Secretary for Atmosphere and Oceans, Terry Garcia, joined several dignitaries to formally dedicate the Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS): The Hon. Daniel Inouye (Senator from HI), Rep. Neil Abercrombie and Patsy Mink (Congress members from HI), Lt. Governor Mazie Hirono, Mike Wilson of the Hawaii Department of Land Natural Resources, and world-renown oceanographer, Dr. Sylvia Earle. Nearly 500 people attended the ceremony in Kihei, Maui.

This four-day event was held in acknowledgement of NOAA's and the State of Hawaii's commitment to establish a federal/state partnership for the protection of humpback whales and their habitat in Hawaiian waters. In addition, the event highlighted the important role of the Sanctuary in increasing public awareness regarding the International Year of the Ocean and the need for enhanced marine resource protection.

The warm, shallow nearshore Hawaiian waters of the Sanctuary are among the most important habitats for humpback whales. Approximately two-thirds of the North Pacific humpback whale population uses this site for breeding, calving, nursing, and other vital activities.

As the 12th National Marine Sanctuary to be designated by Congress, the HIHWNMS was officially recognized in 1992 under the Hawaiian Islands National Marine Sanctuary Act. The Sanctuary encompasses approximately 1,400 square miles of federal and state waters, from the 600-foot isobath to the high water mark around the islands of Maui, Molokai, and Lanai, off portions of Kauai, and Oahu and the Northwest coast of the Big Island, Penguin Bank and the Palilolo Channel. The HIHWNMS will be managed by NOAA's National Marine Sanctuary Program (NMSP) in close partnership with the State of Hawaii and NMFS Protected Resources to promote sustainable use of marine resources and to nurture their long-term survival.

Within the HIHWNMS, the primary focus will be on education and research, with guidance from a 25-member Sanctuary Advisory Council.

The Sanctuary will work closely within the existing permit and regulatory programs administered by the State of Hawaii and NMFS to ensure the long-term protection of humpback whales and their Hawaiian habitat. Because this is an important site for the whales, there are added protective measures in Hawaiian waters under the MMPA, which prohibit approach from the water, within 100 yards (90 m), and from aircraft within 1000 feet (300 m).

For additional information about the HIHWNMS, please contact Allen Tom with NMSP at 1 (800) 831-4888 or Gene Nitta with NMFS at (808) 973-2987.



Protected Resources Profile:

Office Director, Hilda Diaz-Soltero

In March of 1997, Hilda Diaz-Soltero joined the Office of Protected Resources with a wealth of experiences that are a perfect match for the Office Director's position she now holds. Hilda believes that she's been blessed throughout her life with the opportunity to receive an excellent education and to participate in many domestic and international conservation efforts in the government as well as in the private sectors.

Hilda discovered her passion for nature when she was very young. She majored in both geology and astronomy at Vassar College, and she went on to pursue graduate studies in tropical ecology. She obtained a Master of Science degree in zoology and wildlife management at the University of Puerto Rico, where she graduated Summa Cum Laude. Since then, she has dedicated her professional career to conservation.

A native of Puerto Rico, she held the post of Secretary of the Department of Natural Resources from 1981-1984, with the distinction of having been the youngest woman Cabinet member in the Puerto Rican government. Hilda then moved to the international arena, working on the protection of biodiversity in 13 Caribbean and Latin American countries as part of The Nature Conservancy's International Program and later as the Director for Conservation for the Conservation International Foundation. She joined the Federal government in 1987 to direct the Caribbean Field Office of the U.S. Fish and Wildlife Service. Some of her accomplishments include significant progress in the recovery of the endangered Puerto Rican parrot; the designation of Laguna Cartagena as a National Wildlife Refuge for which she prepared the restoration and management plan; and the protection from development of the Cabo Rojo Salt Flats, a site of national ecological significance. Her team listed over 25 species to the Endangered Species Act (ESA) list and managed recovery activities for over 50 species in the U.S. tropical islands, among them sea turtles and the West Indian manatee.

In 1991, she moved to the midwest with FWS to work in endangered species, habitat, wetlands inventory and contaminant programs. There, she introduced the use of population viability analysis to manage endangered species, and her team was responsible for downlisting the bald eagle from endangered to threatened. As a result of the great floods of the Mississippi River in 1993, she was able to contribute to a major policy change in floodplain management. Later she worked in the fisheries and federal aid programs where she transformed a hatchery program responsible for the restoration of the lake trout, a fish of vital importance to the Great Lakes. Since 1992, she has served as a member of the Conservation Breeding Specialist Group of the Species Survival Commission of the IUCN-The World Conservation Union.

Hilda's peers have awarded her many honors throughout her career, including the *Department of the Army Commander's Award for Civilian Service* during the Gulf War in 1991, the *Award from the Secretary of the Interior* for outstanding contributions toward the establishment of the National Biological Survey in 1993, and many *Outstanding Performance Awards* in her federal career.

Hilda's first exposure to the world of marine mammal conservation issues came during her three-year service as Director of the NMFS Southwest Region. While in the Southwest, Hilda was instrumental in bridging the gap between the U.S. and Latin American countries involved in tuna fishery/dolphin interactions, which lead to the enactment of the International Dolphin Conservation Program Act in 1997 (see page 1). Currently, Hilda is intensively involved in negotiations to reauthorize the ESA. Since working for NMFS, she has been greatly impressed with the caliber of scientists, fishery managers, and other professionals that have dedicated their lives to the conservation of protected species.

As she reflects on her career, her fondest memories are of accomplishments that she and her colleagues were able to achieve through their courage to find progressive solutions in wildlife management. Hilda says that conservation of biodiversity and endangered species has always driven her career, and that one of the special events she will always treasure is the work to avoid the extinction of the winter run chinook salmon in California. "The fact that those fish stocks are recovering today, and that I was a part of that effort, means more to me than I could ever put into words."

Hilda believes that to be effective in the conservation of natural resources, a person must have creativity in problem solving, a moral compass, perseverance, and plenty of optimism. She says that the world is constantly losing ground in the fight to conserve nature that she can't go home at the end of each day without having gained a little back. In her own words, "There's a lot to do."

"...a person must have creativity in problem solving, a moral compass, perseverance, and plenty of optimism."



NMFS Examines Impacts of Sound on Marine Mammals

NMFS is studying activities that may adversely affect marine mammals, including the impact of anthropogenic (manmade) sound. NMFS' goal is to develop new policies and procedures consistent with the Marine Mammal Protection Act (MMPA) and cognizant of the needs of the affected communities and stakeholders.

As a first step toward this goal, NMFS established an Acoustic Team responsible for ensuring in-house coordination on protected species acoustic issues. The Team is preparing a status report that describes the problems that noise in the marine environment creates, addresses the issue of "harassment" as defined in the 1994 Amendments to the MMPA, and explores various policy options.

In December 1996, the Acoustic Team met with representatives from the Marine Mammal Commission (MMC), the Office of Naval Research (ONR), and the Minerals Management Service (MMS). As a result, an Ad Hoc Interagency Coordinating Group (ICG) on acoustics was established to explore avenues for addressing acoustic issues. The Group is comprised of representatives from NMFS, MMC, ONR, MMS, the U.S. Coast Guard, the U.S. Geological Survey, and the U.S. Army Corps of Engineers.

The ICG recommended that a series of workshops be conducted to obtain scientific information on acoustic questions. Two workshops were proposed for 1998. The first was the Behavioral and Nonhearing Physiological Responses to Manmade Sound, funded by ONR, which was held in February. The second was the Acoustic Criteria/Impact Assessment, funded by NMFS, to be held in May or June 1998. The goal of the latter workshop is to determine under what circumstances producers of anthropogenic sound need apply for an authorization from NMFS.

For additional information about acoustic harassment of marine mammals, contact Jeannie Drevenak at (301) 713-2289 or Ken Hollingshead at (301) 713-2322.

Scientific Research to Study the Effect of Low Frequency Sound on the Behavior of Marine Mammals

Researchers at Cornell University and the Woods Hole Oceanographic Institution have conducted studies on the potential impact of low frequency sound (LFS) on marine mammals judged to be particularly sensitive to low frequency noise.

This Navy-sponsored research was conducted in three phases: Phase I focused on feeding blue and fin whales in the Southern California Bight; Phase II on migrating gray whales off the Central California Coast; and Phase III focused on singing humpbacks and foraging sperm whales in Hawaii. A permit to conduct Phase I of the research was issued by NMFS, followed by two permit amendments to authorize Phases II and III, in part based on extensive mitigation measures to prevent adverse effects. A 30-day public comment period preceded each permit action. Environmental assessments were prepared for all three phases of the research and NMFS issued a "Finding of No Significant Impact" for each.

Data obtained from this research is expected to contribute to the completeness and accuracy of an Environmental Impact Statement (EIS), currently being prepared by the U.S. Navy, on the proposed worldwide operational employment of a Surface Towed Array Surveillance System - Low Frequency Active (SURTASS - LFA) sonar system. In addition to providing information for the EIS, the research also may contribute to current knowledge about the effects of many other human-made sources of low frequency sound in the ocean, such as shipping. Such data should prove useful in developing policies concerning noise in the ocean.

Preliminary Results of Phases I and II

In Phase I, visual and acoustic monitoring during playback transmissions showed no obvious behavioral responses from blue whales or fin whales. However, although changes in whale vocalizations were not detected in the field, subsequent statistical analyses indicated a decrease in vocal activity of fin and blue whales.

In Phase II, gray whales were observed diverting around the playback vessel when it was directly in the migration corridor and the sound source was as loud as 185 dB. However, substantially reduced diversion was observed when the playback vessel was offshore on the edge of the migration corridor and the source was as loud as 200 dB.

Phase III

The specific goals of Phase III were to assess the potential effects of LFS on the behaviors, vocalizations, and movements of humpback and sperm whales off the Big Island of Hawaii during mid-February to mid-April 1998. This research "window" allowed for a maximum of 30 days of LFS playback experiments. A subset of the SURTASS-LFA sonar system was used that is specifically adapted for LFS playbacks. A passive array of underwater microphones tracked singing whales, and sophisticated computer models were used to predict the acoustic field generated during the transmissions and potentially sensed by the whales. These models allowed the investigators to precisely control the sound exposure to the individual whale they were following. Extensive visual and acoustic monitoring protocols and mitigation measures were followed to minimize the chance that any marine mammal or sea turtle was exposed to harmful sound levels.

For additional information about LFS research, contact Jeannie Drevenak at (301) 713-2289 or visit the Navy's LFA web site at: www.cpf.navy.mil.

NMFS Hears from Stakeholders

In the spirit of cooperation, stakeholders in marine mammal conservation issues will now have the opportunity to use the MMPA Bulletin as a forum to express their views about working toward common goals. Guest authors from other government agencies, the fishing industry, or conservation groups may contribute, but letters written to NMFS by constituents may also appear. The views expressed by the guest authors are solely their own and do not necessarily reflect NOAA's positions or policies.

Progress and Pitfalls in Implementing the New Regime for Incidental Takes of Marine Mammals in Commercial Fisheries by: Andrew J. Read, PhD

The 1994 Amendments to the MMPA required, for the first time, an assessment of the status of every marine mammal stock in U.S. waters. In response to this legislative requirement, NMFS has conducted a tremendous amount of research on stock structure, abundance and mortality levels of marine mammals in commercial fisheries. These data are contained in Stock Assessment Reports prepared for each stock of marine mammals.

NMFS biologist, Paul Wade, and I have conducted an analysis of data contained in these reports and found important regional differences in the status of marine mammal stocks. Most Atlantic and Pacific coast stocks experience some level of human-induced mortality (takes), primarily from gillnet fisheries. The proportion of stocks with takes was much lower in the Gulf of Mexico and Hawaii, where such gillnet fisheries do not exist.

These assessments have greatly advanced our understanding of the status of marine mammals in U.S. waters, but important information gaps still remain, particularly with regard to stock structure and unmonitored fisheries. Nevertheless, we know considerably more about the status of marine mammals in the U.S. today than we did prior to 1994. Continuing stock assessment research promises to improve our understanding of these stocks and their interactions with commercial fisheries.

The 1994 Amendments also provided a mechanism for reducing the level of anthropogenic mortality and serious injury of marine mammals in commercial fisheries through the take reduction process. In this aspect of the new regime, progress has been difficult to achieve. Three of the five teams managed to reach consensus plans, but only two final plans have been published and are being implemented. The other three plans are mired in various stages of public comment, environmental impact assessment, litigation or bureaucratic malaise.

I believe that it is fair to say that few participants in the Take Reduction process have found it to be a satisfactory or equitable mechanism for reducing the bycatch of marine mammals in commercial fisheries. With the first round of Take Reduction Team meetings behind us, it is an appropriate time for NMFS to determine what aspects of this process could be changed to make it more effective. Whatever changes are necessary, the concept of

bringing all stakeholders to the table to engage in the decision-making process is fundamentally important and should not be abandoned.

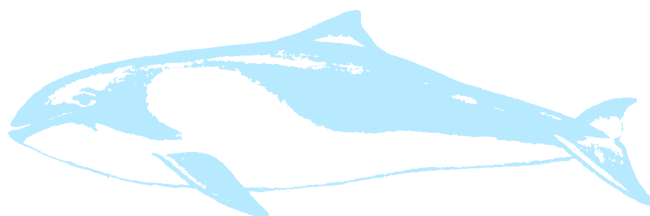
"The concept of bringing all stakeholders to the table...is fundamentally important and should not be abandoned."

The mechanisms for assessing and reducing interactions between marine mammals and commercial fisheries outlined in the MMPA can be improved, but they are better than any other system in the world. No other country requires the comprehensive assessment of all marine mammal stocks,

establishes removal levels, or has a mechanism in place to reduce incidental mortality to sustainable levels. One of the most important aspects of the MMPA in its current form, is its focus on improving the efficiency of domestic fisheries by reducing the bycatch of marine mammals.

As we work towards improving the stock assessment and (particularly) the take reduction processes, we should be careful to make sure that the fundamental components of this system are retained and protected.

Dr. Read is an Assistant Professor in the Nicholas School of the Environment at Duke University, where he teaches and studies the ecology and conservation biology of marine mammals. He is a member and past chair of the Atlantic Scientific Review Group and a veteran of three Take Reduction Teams. Dr. Read can be reached at: aread@mail.duke.edu.



Working Group on Unusual Marine Mammal Mortality Events Meets

Section 304 of the Marine Mammal Health and Stranding Response Act established the Working Group on Unusual Marine Mammal Mortality Events to act as consultant when unusual mortality events are suspected, to determine whether such an event is actually occurring. The Working Group also provides advice on specific actions that should be taken in response to these types of events. The Group is made up of 14 individuals, which are appointed to serve three-year terms. They come from a wide range of scientific disciplines, which include: veterinary medicine, pathology, epidemiology, toxicology, and marine mammal science.

"The Working Group noted...examples of the devastating impacts that unusual mortality events can have on marine mammal species threatened with extinction."

They met at the NMFS headquarters office in Silver Spring, Maryland April 13-14 for its annual meeting. The Group discussed several issues which had arisen over the last year including: the impacts of El Niño on marine mammal mortality, recent die-off investigations, and updates on the Marine Mammal Health and Stranding Response Program.

The Group discussed recurrent pinniped mortality events caused by El Niño, noting that although these recurring weather events (and their effects on marine mammals) cannot be prevented, important data can and *should* be collected from affected animals. These extreme weather events may be the primary cause of mortality, but if the effects on marine mammals are not monitored now and during future events, a masking effect may actually occur. In other words, without close observation of how El Niño affects marine mammals, other causes of mortality could be overlooked or "masked" within the weather event.

The Working Group also reported progress on recent mortality events officially designated as "unusual." One of these events was the harbor seal deaths in California last summer. The Group determined that although several possible causes of the event have been eliminated, more diagnostic analysis is needed for certainty.

There was much discussion about recent mortality events involving endangered species both in the United States and abroad. In 1997, the Mediterranean monk seal, a critically endangered species, was dealt a formidable blow when approximately two-thirds of the remaining breeding colony was lost to a mass mortality event. Currently, the European scientific community, along with informal consultation from the Working Group, has not completely resolved the cause of this event. A similar situation also arose in New Zealand with the death of Hooker sea lions. Again, the definitive cause of the event has not been determined.

In 1996, another such case happened here in the United States with the mortality of over 150 manatees in Florida waters. As a result, the Working Group, Florida Department of Environmental Protection, and the U.S. Fish and Wildlife Service (FWS) have evaluated their working relationships, resulting in a FWS manatee Contingency Plan and more a detailed Florida State Contingency Plan for manatees. The

Working Group noted that these recent occurrences are perfect examples of the devastating impacts that unusual mortality events can have on marine mammal species threatened with extinction. These events also clearly illustrate the need for quick and organized responses to such events.

The Working Group encouraged continuation of NMFS training workshops for stranding network participants around the country similar to the 1997 Forensic Investigations of Marine Mammal Strandings Workshop held in July in Charleston, South Carolina. Participants in the Working Group offered advice to the MMHSRP National Coordinator regarding topics for an upcoming training workshop in Sausalito, California in 1998. Additionally, the Group reviewed current policies, agreements, and plans for the archival of marine mammal blood serum and tissue samples for the MMHSRP and quality assurance.

Finally, NMFS would like to express its gratitude to the *outgoing* members of the Working Group: Dr. Joe Geraci (Chair), Dr. Greg Bossart, Dr. Bob Hofman, and Dr. John Reif. Each of these members has spent a considerable amount of time and effort organizing and directing the Working Group, as well as advising NMFS and FWS on investigations and development of the infrastructure needed to better respond to mortality events. Their contributions will certainly be felt for many years to come.

For additional information about the Working Group on Unusual Marine Mammal Mortality Events, please contact Dean Wilkinson at (202) 482-1166 or Teri Rowles at (301) 713-2322.

New Marine Mammal Observer Program for Alaska Salmon Net Fisheries

In the summer of 1999, NMFS plans to begin a multi-year marine mammal observation program for salmon net fisheries in Alaska, specifically the nearshore purse seine, drift gillnet, and set gillnet fisheries. This program will collect data to identify potential areas of concern, and to improve the design of subsequent observer programs. This first two years will focus on fisheries in Southeast Alaska in four general fishing regions: Southeast Alaska, Cook Inlet, Kodiak Island, and Bristol Bay.

The 1994 Amendments to the MMPA mandate that NMFS measure impacts of commercial fisheries on marine mammal stocks and categorize fisheries accordingly. Salmon net fisheries in Alaska are listed as Category II (occasional incidental mortality or serious injury) based on a smaller observer program in Prince William Sound during 1990-91, outdated logbook reports, occasional reports by fishers, and from stranding records. By directly observing these fisheries through this new observer program, NMFS can collect data that more accurately reflects current fishing effort and marine mammal bycatch levels. During the next year, NMFS will work with the fishing industry to ensure success of the program while minimizing impact to the fisheries.

For more information about this observer program, contact Dr. Brian Fadely in Alaska at (907) 586-7235 or Vicki Cornish at (301) 713-2322.

Publications available from the Office of Protected Resources

If you would like to receive any of the publications listed below, please mark the appropriate circles, cut this page along the dotted line, fold in half, seal the bottom (this side inside), and mail it to the address provided. Please be sure to fill out the address form on the back to indicate where you want the requested items to be sent. Allow 4-6 weeks for delivery. Remember, many of these documents can be easily accessed at the NMFS Office of Protected Resources web site on the World Wide Web either in PDF or text format (www.nmfs.gov/prot_res).

- ☐ The Marine Mammal Protection Act of 1972 As Amended. (February 1995)

Marine Mammal Protection Act of 1972 Annual Report to Congress

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Office of Protected Resources Technical Memorandum Series:

- ☐ NMFS Observer Programs: Minutes and Recommendations of a Workshop Held in Galveston, TX Nov. 10-11, 1993. NMFS-OPR-1, 96 p. (July 1994).
- ☐ Marine Mammal Health and Stranding Response Program: Program Development Plan. NMFS-OPR-2, 35 p. (July 1994)
- ☐ Pinniped Forensic, Necropsy, and Tissue Collection Guide. NMFS-OPR-3, 80 p. (August 1994)
- ☐ Coastal Stock(s) of Atlantic Bottlenose Dolphin: Status Review and Management. NMFS-OPR-4, 120 p. (October 1994)
- ☐ U.S. Marine Mammal Stock Assessments: Guidelines for Preparation, Background, and a Summary of the 1995 Assessments. NMFS-OPR-6, 73 p. (September 1995)
- ☐ Rescue, Rehabilitation, and Release of Marine Mammals: An Analysis of Current Views and Practices. NMFS-OPR-8, 65 p. (July 1996)
- ☐ National Contingency Plan for Response to Unusual Marine Mammal Mortality Events. NMFS-OPR-9, 118 p. (September 1996)
- ☐ Report of the Workshop to Assess Research and Other Needs and Opportunities Related to Humpback Whale Management in the Hawaiian Islands. NMFS-OPR-11, 134 p. (February 1997)
- ☐ Guidelines for Assessing Marine Mammal Stocks: Report of the GAMMS Workshop April 3-5, 1996, Seattle, Washington. NMFS-OPR-12, 93 p. (February 1997)
- ☐ Differentiating Serious and Non-Serious Injury of Marine Mammals Taken Incidental to Commercial Fishing Operations: Report of the Serious Injury Workshop 1-2 April 1997, Silver Spring, Maryland. NMFS-OPR-13, 48 p. (January 1998)

(fold here)

Reports and Other Office Publications:

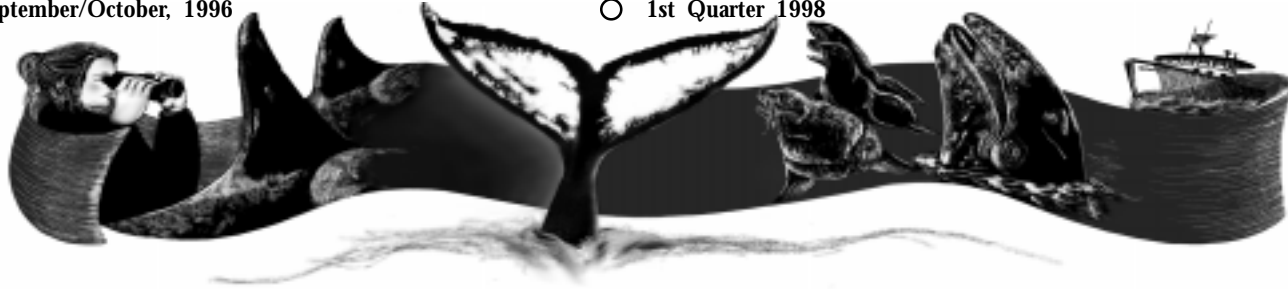
- ☐ Environmental Assessment of Proposed Regulations to Govern Interactions Between Marine Mammals and Commercial Fishing Operations, Under Section 118 of the Marine Mammal Protection Act. (June 1995)
- ☐ Marine Mammal Strandings in the United States. Proceedings of the Second Marine Mammal Stranding Workshop, Miami, FL. December 3-5, 1987. U.S. Dep. Commer., NOAA. (January 1991)
- ☐ Survey for Morbillivirus to Pinnipeds Along the Northeastern Coast (for the NMFS). New England Aquarium, Boston, Mass. (September 1993)
- ☐ Alaska Marine Mammal Tissue Archival Project: Revised Collection Protocol, NISTIR 4529, NIST. U.S. Dep. Commer., NOAA, National Ocean Service, and U.S. Dep. Commer., National Institute of Standards and Technology. (March 1991)
- ☐ Alaska Marine Mammal Tissue Archival Project: Specimen Inventory, NISTIR 5462, NIST. U.S. Dep. Commer., NOAA, National Ocean Service, and U.S. Dep. Commer., National Institute of Standards and Technology. (November 1994)
- ☐ Quantitative Behavioral Study of Bottlenose Dolphins in Swim-With-The Dolphin Programs in the United States. (April 25, 1995)
- ☐ Report to Congress on Results of Feeding Wild Dolphins: 1989-1994. (July 1994)

ESA Reports/Recovery Plans

- ☐ Endangered Species Act Biennial Report to Congress: Status of Recovery Programs July, 1994 - September, 1996. (March 1997)
- ☐ Final Conservation Plan for the Northern Fur Seal, *Callorhinus ursinus*. (June 1993)
- ☐ Recovery Plan for the Steller Sea Lion, *Eumetopias jubatus*. (December 1992)

MMPA Bulletin Back Issues

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NMFS and Fishermen Come Together at Take Reduction Plan (TRP) Forums

NMFS recently conducted several informational programs to communicate the purposes and goals of the Take Reduction Plans (TRP) to the commercial fishing industry. These programs, conducted in conjunction with East Coast commercial fishermen's exhibitions, gave fishermen the opportunity learn more about the TRP process and to express their concerns in person to NMFS managers and biologists.

NMFS worked with the Maine Department of Marine Resources, Massachusetts Department of Marine Fisheries, University of Rhode Island, and NOAA Sea Grant to develop ways of conveying a message of cooperation to commercial fishers. Information was provided at both a public display booth in the exhibition hall and at interactive seminars. Handouts were distributed describing the TRPs and the new mandated process for managing interactions between commercial fisheries and marine mammals. Educational factsheets informed fishers of what to do in cases of whale entanglement and provided guidance on identifying species of marine mammals. Seminars and panel discussions were conducted detailing the specific requirements of the existing take reduction process and provided an opportunity for input from fishers and other interested groups.

TRP informational programs were held:

- * Long Island Fishermen's Forum, Riverhead, NY (Jan. 23-24)
- * Lobster Summit, Hyannis, MA (Jan. 30-31)
- * East Coast Commercial Fishermen and Aquaculture Expo, Ocean City, MD (Jan. 30-Feb. 1)
- * NC Fishing Show, Moorehead City, NC (Feb. 27-March 1)
- * Maine Fishermen's Forum, Rockport, ME (March 5-8)

NMFS also sent out information about the TRPs to more than 16,000 lobster fishermen, as well as gillnet and squid, mackerel, and butterfish federal permit holders. At some of the meetings, Sea Grant and/or NMFS representatives provided demonstrations of the "weak link" technology, which was developed to reduce the entanglement of large whales in fishing gear. The use of "weak links" on buoy lines is one of the many take reduction measures included in the Atlantic Large Whale Take Reduction Plan.

By attending these meetings, NMFS was able to reach out to fishery representatives to begin resolving conflicts that have arisen from opposing interests and differing ideas about how marine mammal bycatch in fisheries should be addressed. Through increased cooperation with state managers and fishers, NMFS hopes to design TRPs that will reach the goal of decreased marine mammal bycatch, but also stand the test of time with an industry in flux. NMFS is making plans to attend other upcoming fishermen's gatherings on the East Coast to get the word out about TRPs.

For more information, contact Doug Beach at (978) 281-9254 or Vicki Cornish at (301) 713-2322.

World Marine Mammal Science Conference

Over 1200 participants from 55 countries met in Monaco from January 20-24 for an international meeting coordinated by the Society for Marine Mammalogy (SMM) and the European Cetacean Society. This joint conference was an opportunity for marine mammal researchers and managers from all over the world to come together.

A plenary session was held entitled "Hot Topics in Marine Mammal Science." Topics included the use of marine mammal blubber as an ecological tool, new developments in knowledge about marine mammal intelligence, the effects of manmade noise on marine mammals, and the current status of genetic studies on marine mammals. During the general sessions, presentations were given on the subjects of: ecology, acoustics, life history, behavior, research techniques, genetics, evolution, systematics, conservation/management, physiology, medicine, disease, and pollution.

Symposia were held on such topics as: "Migration of Baleen Whales," "Scale Issues in Marine Mammals," "How Noise Pollution Affects Marine Mammals and the Policy Surrounding This," "Marine Mammals and Oceanographic Processes," and "Management of Marine Mammals."

NMFS scientists contributed to over 50 presentations (oral, poster, and symposia) on a wide range of subjects such as behavior, physiology, and management. Roger Gentry from the NMFS National Marine Mammal Laboratory served as co-chair for the Science Program and Karin Forney at the NMFS Southwest Fisheries Science Center received the "Best Doctoral Student Oral Presentation" award for her presentation of "Investigating the environmental component of trends in harbor porpoise abundance using generalized additive models".

To request copies of the conference program or the abstract book, you can visit the SMM web site at: pegasus.cc.ucf.edu/~smm. For additional information about the SMM, please contact Doug DeMaster, SMM Acting President, at douglas.demaster@noaa.gov.

Fishery Observers Wanted

Up to 16 fishery observers are needed in Hawaii to collect information about the incidental involvement of marine mammals, sea turtles, and sea birds in the year-round Hawaii pelagic longline fishery. Most trips originate in Oahu and are typically three weeks in duration aboard vessels that are 50 to 110 feet in length. Applicants should have a Bachelor's Degree or equivalent experience in the physical and fisheries sciences, and must be able to pass a pre-employment physical examination. Qualified individuals with ocean experience aboard small boats are especially encouraged to apply. A three-week training course must also be completed prior to deployment in June 1998. For more information, see vacancy announcement #W/NMF/SWR/98224/LN at <http://www.rdc.noaa.gov/~webvas>.

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From the Editors...

The *MMPA Bulletin* has undergone many changes in this issue in terms of appearance as well as content. Undoubtedly, the most notable enhancements to the *Bulletin* are the exclusive drawings by artist and graphic designer, Katherine Zecca, of the National Marine Mammal Laboratory in Seattle. Katherine's work has graced the covers of several NMFS publications as well as the NMFS 125th Anniversary poster. Each issue will feature artwork created by her especially for the *Bulletin*. Also, with this issue Trevor Spradlin joins the *MMPA Bulletin* editorial team. He has worked at the Office of Protected Resources in the Permits Division for over two years, and has contributed to previous *MMPA Bulletin* articles.

In addition, there will be new sections appearing in every *Bulletin* issue. One of these will be "Stranding News", which will feature different aspects of the Marine Mammal Health and Stranding Response Program as well as recent stranding news from around the country. Also in each edition, there will be an article focusing on a member of the Office of Protected Resources marine mammal conservation team. A section entitled, "NMFS Hears From Stakeholders" has been dedicated to the perspectives of those people, outside of NMFS, with vested interests in marine mammal conservation issues. We hope you enjoy these modifications and, as always, please continue to send us your comments and suggestions. We value your input.

Thanks,
The *MMPA Bulletin* Editorial Staff



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